WHAT IS CLAIMED IS:

1. A method of controlling an electromagnetic parts feeder which comprises a vibrating unit provided with an electromagnet of which magnetic field vibrates at a predetermined frequency, a driving circuit for driving said electromagnet, and a control unit for outputting a driving signal to said driving circuit to cause a predetermined driving, comprising the steps of:

idling the driving of said electromagnet temporarily at every predetermined driving cycles of said electromagnet; and

controlling vibration of said vibrating unit based on a signal obtained from a coil of said electromagnet by its electromagnetic induction during a period of said idling.

2. The method set forth in claim 1, wherein said vibration of said electromagnet is controlled based on a phase difference between a waveform of said signal obtained from said electromagnet by its electromagnetic induction during said idling period and the driving signal of said driving circuit.

3. The method set forth in claim 2, wherein said controlling is performed by previously measuring a resonance frequency of said electromagnetic parts feeder, driving said electromagnet at said resonance frequency by said driving circuit, temporarily idling the driving by said driving circuit at every predetermined driving cycles, storing said phase difference between the waveform of said signal obtained from said electromagnet by its electromagnetic induction during said idling period and the driving signal of said

driving circuit and said resonance frequency in a storage element, and driving said vibrating unit at the stored resonance frequency when it is driven.

4. The method set forth in claim 3, wherein measurement of said resonance frequency of said electromagnetic parts feeder is performed by driving said electromagnet by said driving circuit, idling the driving by said driving circuit temporarily at every predetermined driving cycles, measuring a signal obtained from said electromagnet by its electromagnetic induction during a period of said idling, and assuming a frequency at which said signal becomes maximum as said resonance frequency.

5. The method set forth in claim 3, wherein said vibrating unit is controlled in such a way that said phase difference between the waveform of the signal obtained by said electromagnetic induction and the driving signal of said driving circuit becomes equal to the stored phase difference.

6. The method set forth in claim 1, wherein said idling period is one cycle or 1.5 cycles of said driving cycles.

7. An apparatus for controlling an electromagnetic parts feeder, comprising:

a vibrating unit provided with an electromagnet that vibrates at a predetermined frequency;

a bowl adapted to discharge parts accommodated therein by means of said vibrating unit;

a driving circuit for driving said electromagnet;

a control unit for outputting a driving signal to said driving circuit to cause a predetermined driving and

temporarily idling the driving of said electromagnet at every predetermined driving cycles of said electromagnet;

a signal detecting means for detecting a waveform of a signal obtained from a coil of said electromagnet by its electromagnetic induction during a period of said idling;

a phase difference detecting means for detecting a phase difference between the waveform of said signal obtained by said signal detecting means and a waveform of said driving signal of said driving circuit; and

a vibration controlling means for controlling vibration of said electromagnet based on the phase difference obtained by said phase difference detecting means.

8. The apparatus set forth in claim 7, wherein said signal detecting means is a voltage detecting circuit.

9. The apparatus set forth in claim 7, wherein said control unit is provided with an amplitude setting circuit for adjusting an amplitude of said vibrating unit through the medium of said driving circuit, a mode setting circuit for shifting the driving mode of said parts feeder from an adjustment mode to an operation mode and vice versa, and a nonvolatile memory for storing data.